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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,508

12/16/2005

Roberto Angelo Motterlini

620-371

7230

23117

7590

10/03/2007

NIXON & VANDERHYE, PC

901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER

SOROUGH, ALI

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

10/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/535,508	Applicant(s) MOTTERLINI ET AL.	
	Examiner Ali Soroush	Art Unit 1616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                       |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 and 6-9 rejected under 35 U.S.C. 102(b) as being anticipated by Motterlini et al. (Carbon Monoxide-releasing Molecules Characterization of Biochemical and Vascular Activities, Circulation Research, Published 02/08/2002).

Motterlini et al. teaches  $[\text{Ru}(\text{CO})_3\text{Cl}_2]_2$  freshly dissolved in DMSO (see page 19, column 2, paragraph 3) was added consecutively to aortic rings (see page 21, column 1, paragraph 2) which were isolated from male Lewis rats (see page 19, column 1, paragraph 5). Motterlini et al. teaches that  $[\text{Ru}(\text{CO})_3\text{Cl}_2]_2$  freshly dissolved in DMSO releases CO into the solution. (see page 19, column 2, paragraph 3). Pentacarbonyl however is taught that upon light being administered then releases CO by photodissociation. (see page 19, column 2, paragraph 3). With regards to the claim limitation “to limit post-ischaemic damage” as in claim 2 and the mechanism by which the CO is released as in claim 3 they are inherent properties of the method. The instant method and the prior art method steps are indistinguishable and are applied to the same population therefore the mechanism of action would be expected to be the same.

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(See In re Best). For the foregoing reasons the instant method of treatment is anticipated.

2. Claim 1-3, and 5-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Clark et al. (Cardioprotective Actions by Water-Soluble Carbon Monoxide-Releasing Molecule, Circulation Research, Published 07/25/2003).

Clark et al. teaches tricarbonylchloro(glycinato)ruthenium(II) in distilled water (see page 3, column 1, paragraph 2 and page 4, column 1, paragraph 1) was used to treat isolated heart for ischemia-reperfusion injury after contacting the organ with the metal carbonyl. (See page 5, column 1, paragraph 1). With regards to the claim limitation "to limit post-ischaemic damage" as in claim 2 and the mechanism by which the CO is released as in claim 3 they are inherent properties of the method. The instant method and the prior art method steps are indistinguishable and are applied to the same population therefore the mechanism of action would be expected to be the same. (See In re Best). For the foregoing reasons the instant method of treatment is anticipated.

### ***Conclusion***

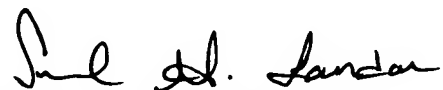
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Soroush whose telephone number is (571) 272-9925. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm E.S.T.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number For the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ali Soroush  
Patent Examiner  
Art Unit: 1616



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Sharmila Landau  
Primary Patent Examiner  
Technology Center 1600